



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 5

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CHICAGO, IL 60604-3590

MAY 11 2005

EPA Region 5 Records Ctr.



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REPLY TO THE ATTENTION OF:

D-8J

MEMORANDUM

SUBJECT: Application of TSCA Regulations
Midwest Metallica Site, Summit, Illinois

FROM: *for Willie H. Harris*
Margaret Guerriero, Director
Waste, Pesticides and Toxics Division

TO: Richard Karl, Director S-6J
Superfund Division

The purpose of this memorandum is to document the approval of the Waste, Pesticides and Toxics Division (WPTD) regarding the application of the TSCA regulations to the proposed removal action at the Midwest Metallica Site in Summit, Illinois. This memorandum will briefly explain current Site conditions, and memorialize WPTD's concurrence with the proposal of the Superfund Division to contain auto shredder residue (ASR) in place at the Site, consistent with TSCA regulations.

The hazardous substances present at the Site consist of lead and polychlorinated biphenyls (PCBs) contained in the ASR which is present to various depths over the 23 acre site and in a large waste pile, exceeding 180,000 cubic yards at the southeast corner of the Site. The proposed response action will mitigate threats to public health, welfare, and the environment posed by the presence of uncontrolled hazardous substances on the surface of the Site. Proposed removal actions include, but are not limited to, the assessment and stabilization of chemical hazards at the Site, through consolidation of the ASR and construction of an impervious cap.

Site Conditions/ Risks Presented by Site

The Site is located at 7955 West 59th Street in the City of Summit, Cook County, Illinois. Approximately 30 acres in size, the Site is located 10 miles southwest of Chicago, Illinois. The Site is bordered by an industrial complex and 59th Street to the north; by railroad tracks and an automobile junkyard to the east; and by railroad tracks and railroad yard to the south and west.

Although the Site is located in an industrial neighborhood, there is significant residential development less than 1,000 feet to the southeast of the site. Additionally, because a new owner recently purchased the portion of the Site which does not include the large waste pile, there are active, on-going commercial operations in the vicinity of the pile.

A Removal Site Assessment was conducted on March 15, 2000, to determine the extent of the ASR previously observed at the Site, and to obtain additional analytical data. Eleven samples were collected at 200 foot intervals along the base of the large pile, and eight samples were collected on the top of the pile. Eight surface samples, a sediment sample and one water sample were also collected. The samples were analyzed for Total lead, TCLP metals, and PCBs. The results identified total lead levels ranging from 20.6 to 180,000 ppm, TCLP lead levels of 0.283 to 94.1 ppm, and PCBs from 7.6 to 217.7 ppm.

The maximum reported concentrations for total PCBs, TCLP lead and cadmium, and total lead were 217.7 ppm, 94.1 ppm, 1.07 ppm, and 180,000 ppm, respectively, for the ASR samples. These values all exceed the regulatory or guideline limits established by U.S. EPA for these compounds. Exposure to PCBs can result in impaired liver function; a variety of neuro-behavioral symptoms; menstrual disorders; and an increased incidence of cancer. Lead exposure has been shown to produce infertility, retarded mental development in young children, tiredness, constipation, muscle pains, seizures, memory and concentration difficulties, and other symptoms.

As all samples collected at the Site were surface or near-surface samples (within 24 inches of ground), the sample locations are susceptible to erosion impacts. The most likely erosion mechanisms at the Site are wind and rain, both excellent mechanisms for off-site material transport. Mechanical transport of contaminants also poses a threat as truck traffic, particularly from the operations of the new owner, appears to travel over the contaminated areas and potentially may track material off Site.

There is also a threat of fire or explosion at this Site due to the existence of combustible ASR material, which if involved in a fire, may pose a health risk to residents who live within 1000 feet of the Site. Inspections in 2001 and 2005 continue to indicate the possibility of elevated temperatures within the main pile of ASR, cracks on the surface of the pile have been visually observed releasing smoke and/or steam, and during the most recent inspection in February 2005, steam was observed rising from the entire east slope of the pile. Among the identifiable material types that were observed in the ASR at the Site were foam, plastics, fabrics, and rubber. These materials are all combustible under certain conditions and, when burned, have the potential to produce noxious and/or toxic emissions, along with the potential to release the known hazardous substances lead and PCBs. Due to the volume of ASR on-site, a fire would pose an imminent and substantial endangerment to public health and welfare. Prior indication of an internal fire was evident in 2001, and the possibility of an underground fire due to the nature of this material is extremely high and would pose an imminent risk to the public health.

Response actions were not taken immediately after the Removal Site Assessment, due to the fact that the State of Illinois had instituted an enforcement action against the Midwest Metallica company and various principals in Illinois State court. That action sought the off-site disposal of the ASR material, and was largely unsuccessful. The company and the individual operator who created the Site conditions, as well as a successor corporation, have filed for bankruptcy; other principals were dismissed in pre-trial proceedings from the State's enforcement action.

U.S. EPA has been asked by the State of Illinois to re-institute response and enforcement activities at the Site.

Proposed Response Actions

There are obvious time-critical elements present at the Site. The hazardous substances are located in an unsecured Site, with signs of public trespass, located near industrial and residential areas, and must be immediately addressed. Although there are threats associated with the ASR which is located outside of the large waste pile, the principal threats, as discussed below, derive from the 180,000 cubic yard waste pile. Threats associated with the ASR scattered on the remainder of the Site are expected to be addressed using EPA's enforcement authority. The proposed removal actions at the Site would eliminate the imminent and substantial threats to human health, welfare, or the environment associated with the waste pile.

The Superfund Division proposes to undertake the following response actions to mitigate threats posed by the presence of hazardous substances at the Site:

- a. Develop and implement a Site-specific work plan, including a proposed time line.
- b. Develop and implement a Site-specific health and safety plan.
- c. Establish and maintain Site security measures during the removal actions, which may include security guard service.
- d. Develop and implement an air monitoring and sampling program during removal activities.
- e. Identify, sample and characterize the hazardous substances located at the Site.
- f. Excavate contaminated soil, and ASR, and stage on-site, as necessary.
- g. Consolidate ASR/soil material in preparation for on-site disposal.
- h. Construct a solid waste cap to secure ASR/soil materials.

- i. Provide measures to prevent erosion and control runoff.
- j. Install fencing as needed to secure the disposal area.
- k. Implement institutional controls, to ensure the continued protectiveness of the removal measures which are conducted and to protect against the threats outlined above.

The proposed removal actions outlined above target the large waste pile only.

Application of TSCA Regulations to Proposed Response Action

Because PCBs were found at the Midwest Metallica Site, the regulations under the Toxic Substances Control Act are applicable to the Site. 40 C.F.R. Part 761, Subpart D, Storage and Disposal, and particularly 40 C.F.R. § 761.61, define the disposal requirements for bulk PCB remediation waste. 40 C.F.R. § 761.61(a)(4)(i)(B) states that PCBs may remain in place under a cap, at a site in a low occupancy area for PCB concentrations less than 100 ppm.

Some of the analytical results at the Midwest Metallica Site showed PCBs concentrations above the 100 ppm concentration limit for on-site disposal, as defined by 40 C.F.R. § 761.61. However, the U.S. EPA document *Sampling Guidance for Scrap Metal Shredders - Field Manual* (EPA 747-R-93-009), was published in order to provide PCB sampling methodology for addressing ASR in situations such as those presented by the Site: a large volume, non-homogeneous waste stream. Part of that guidance uses confidence intervals, a means of addressing the concentration of a large pile as a whole. The confidence interval, as applied to ASR, will provide a range of concentrations that the true value of the pile as a whole falls within. The accuracy of that representation is dependent upon the number of samples taken. At Midwest Metallica, samples were taken on November 26, 1996 and March 15-16, 2000. A total of 26 samples were collected. Using the sampling data with the methodology described above, the confidence interval can be expressed, that with 95% certainty, the PCB concentration of the material on site is from 57 ppm to 96 ppm. This range would allow for on-site disposal, consistent with the requirements of 40 C.F.R. § 761.61(a)(4)(i)(B).

Under the TSCA regulations, the necessary cap requirements are defined by § 761.61(a)(7); this provision also incorporates the RCRA closure and post-closure care requirements of 40 C.F.R. § 264.310(a) and the permeability, sieve, liquid limit, and plasticity index parameters of 40 C.F.R. § 761.75(b)(1)(ii) through (b)(1)(v). The necessary deed restriction requirements are defined by 40 C.F.R. § 761.61(a)(8).

It should also be noted that the cost estimate for the response action outlined above is \$3,201,600. Because both the company and the individual operator who created the Site conditions have filed for bankruptcy and the other principals were dismissed in Illinois State court,

U.S. EPA's enforcement options remain limited here. It has been estimated that it would cost approximately \$13 million for off-site disposal of the ASR. Due to the limited monies available to the Superfund Division for all emergency response actions, sufficient monies would not be available for the off-site disposal of the ASR from Midwest Metallica. It is also unclear whether conditions at the Site are sufficiently serious that the Hazard Ranking System score which could be generated for the Site would enable it to be placed on the National Priorities List. In any event, the NPL listing process is extremely time-consuming.

The emergency response actions outlined above are the best manner to address the threats posed by the Site in the short- and near- term. Any alternative course of action is likely to leave the large pile, consisting of approximately 180,000 cubic yards of ASR and located within 1000 feet of a residential area, unaddressed, while the threats posed by the Site would continue.

CONCURRENCE

Given the conditions present at the Midwest Metallica site, the limited range of options available to the Agency, and the regulatory analysis presented above, I concur in the on-site disposal of ASR as outlined above. I agree that the proposed removal action is consistent with the TSCA regulations for bulk PCB remediation waste.

Wille H. Harris
for Margaret Guerriero, Director
Waste, Pesticides and Toxics Division